

TABLE OF CONTENTS

SUMMARY

CHAPTER I PURPOSE AND NEED	1
PURPOSE AND NEED FOR A PROGRAM	1
REASONS FOR THIS EIS.....	3
DECISIONS TO BE MADE.....	7
PUBLIC INVOLVEMENT: SCOPING	8
COOPERATING AGENCIES	9
MANAGING VEGETATION AT BONNEVILLE FACILITIES	10
RELATED PROJECTS AND PLANNING ACTIVITIES	18
HOW THIS DEIS IS ORGANIZED	20
CHAPTER II THE METHODS.....	23
METHODS OVERVIEW	23
MANUAL CONTROL METHODS	24
MECHANICAL CONTROL METHODS.....	28
BIOLOGICAL CONTROL METHODS	31
HERBICIDE CONTROL METHODS: ACTIVE INGREDIENTS.....	35
HERBICIDE CONTROL METHODS: APPLICATION	38
DEBRIS DISPOSAL	44
RESEEDING AND REPLANTING	46
APPROVING NEW TECHNIQUES FOR USE	47
METHODS ELIMINATED FROM CONSIDERATION.....	48
INFORMATION, EDUCATION, AND PREVENTION	50
CHAPTER III SITE-SPECIFIC PLANNING STEPS.....	51
PLANNING STEPS OVERVIEW.....	51
1. IDENTIFY FACILITY AND THE VEGETATION MANAGEMENT NEED.....	52
2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/ MANAGERS.	56
3. IDENTIFY NATURAL RESOURCES.	60
4. DETERMINE VEGETATION CONTROL METHODS.....	67
5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION METHODS, IF NECESSARY.....	78
6. DETERMINE MONITORING NEEDS.....	80
7. PREPARE APPROPRIATE ENVIRONMENTAL DOCUMENTATION.	81
OTHER REQUIREMENTS	81
CHAPTER IV PROGRAM ALTERNATIVES.....	83
ALTERNATIVES OVERVIEW.....	83
RIGHT-OF-WAY MANAGEMENT APPROACH ALTERNATIVES	87
RIGHT-OF-WAY METHODS PACKAGE ALTERNATIVES.....	93
VEGETATION SELECTION ALTERNATIVES	108
ELECTRIC YARD PROGRAM ALTERNATIVE	111
NON-ELECTRIC PROGRAM ALTERNATIVES.....	112

Table of Contents

CHAPTER V AFFECTED ENVIRONMENT.....	115
SETTING.....	115
VEGETATION	116
SOILS.....	120
WATER	121
FISH AND OTHER AQUATIC SPECIES	124
WILDLIFE	126
LAND USE.....	131
LAND OWNERSHIP/MANAGEMENT.....	134
CULTURAL AND HISTORICAL RESOURCES.....	139
PUBLIC HEALTH AND SAFETY	140
VISUAL RESOURCES	141
AIR QUALITY.....	142
SOCIOECONOMICS	143
 CHAPTER VI ENVIRONMENTAL CONSEQUENCES.....	 145
VEGETATION	145
WATER	154
SOILS.....	162
FISH AND OTHER AQUATIC SPECIES	166
WILDLIFE	169
AGRICULTURE	177
TIMBER PRODUCTION	180
RECREATION	180
RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL.....	182
USFS- AND BLM-MANAGED LANDS.....	184
TRIBAL LANDS.....	187
CITY, COUNTY, AND STATE LANDS.....	188
CULTURAL AND HISTORICAL RESOURCES.....	189
WORKER HEALTH AND SAFETY	190
PUBLIC HEALTH AND SAFETY	194
VISUAL RESOURCES	202
AIR QUALITY.....	204
SOCIAL AND ECONOMIC RESOURCES.....	206
CONSEQUENCES OF RIGHT-OF-WAY MANAGEMENT APPROACH ALTERNATIVES	208
CONSEQUENCES OF RIGHT-OF-WAY METHODS PACKAGE ALTERNATIVES	211
CONSEQUENCES OF RIGHT-OF-WAY VEGETATION SELECTION ALTERNATIVES.....	219
CONSEQUENCES OF ELECTRIC-YARD ALTERNATIVES.....	219
CONSEQUENCES OF NON-ELECTRIC PROGRAM ALTERNATIVES	220
CUMULATIVE IMPACTS	221
EFFECTS OF SHORT-TERM USES OF THE ENVIRONMENT ON LONG-TERM	
PRODUCTIVITY.....	223
IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES.....	223
ADVERSE EFFECTS THAT CANNOT BE AVOIDED	224

LIST OF PREPARERS.....	225
AGENCIES, ORGANIZATIONS, AND INDIVIDUALS TO WHOM THE EIS IS SENT	229
REFERENCES.....	241
GLOSSARY AND ACRONYMS.....	269

INDEX**LIST OF FIGURES**

	Page/After Page
FIGURE I-1 BONNEVILLE SERVICE TERRITORY.....	2
FIGURE I-2 TIERING SITE-SPECIFIC ANALYSIS TO THE PROGRAM EIS	5
FIGURE I-3 HOW THIS EIS IS ORGANIZED.....	21
FIGURE IV-1 HOW THE RIGHT-OF-WAY ALTERNATIVES CAN BE COMBINED	86
FIGURE IV-2 STAGES TO A LOW-GROWING PLANT COMMUNITY	90
FIGURE IV-3 MIX OF METHODS UNDER ALTERNATIVE R1.....	94
FIGURE IV-4 MIX OF METHODS UNDER ALTERNATIVE R2.....	97
FIGURE IV-5 MIX OF METHODS UNDER ALTERNATIVE R3.....	100
FIGURE IV-6 MIX OF METHODS UNDER ALTERNATIVE R4.....	103
FIGURE V-1 PACIFIC NORTHWEST GEOGRAPHY	AP 116
FIGURE V-2 VEGETATION TYPE	AP 116
FIGURE V-3 THREATENED AND ENDANGERED SPECIES	AP 124
FIGURE V-4 LAND OWNERSHIP	AP 134
FIGURE V-5 LAND OWNERSHIP BY PERCENTAGE ALONG CORRIDORS.....	135
FIGURE V-6 BLM- AND USFS-MANAGED LANDS.....	AP 136
FIGURE V-7 LAND OWNERSHIP BY PERCENTAGE AREOUND SUBSTATION PROPERTY.....	137
FIGURE V-8 LAND OWNERSHIP BY PERCENTAGE AROUND RADIO/MICROWAVE STATIONS	138
FIGURE VI-1 RESPROUTING CONSEQUENCES OF CUTTING WITHOUT HERBICIDE FOLLOW-UP	149

LIST OF TABLES

TABLE II-1 CONTROL METHODS APPROPRIATE TO THE FACILITY	27
TABLE II-2 METHODS APPROPRIATE BY RIGHT-OF-WAY VEGETATION TYPES	30
TABLE II-3 IMPACTS SPECIFIC TO THE METHODS	33
TABLE II-4 BONNEVILLE PROPOSED LIST OF APPROVED HERBICIDES FOR USE.....	37
TABLE II-5 COST COMPARISON OF METHODS	44

Table of Contents

TABLE II-6 COST COMPARISON OF DEBRIS DISPOSAL.....	45
TABLE III-1 RIPARIAN BUFFER ZONES	62
TABLE III-2 PESTICIDE-FREE ZONES	62
TABLE III-3 GENERAL CLIMATE RESTRICTIONS FOR HERBICIDE APPLICATIONS	71
TABLE IV-1 COMPARISON OF THE ROW MANAGEMENT APPROACH ALTERNATIVES	92
TABLE IV-2 COMPARISON OF THE METHODS PACKAGE ALTERNATIVES	105
TABLE IV-3 VEGETATION SELECTION FOR HERBICIDE TREATMENT ALTERNATIVES.....	110
TABLE IV-4 COMPARISON OF NON-ELECTRICAL PROGRAM ALTERNATIVES	114
TABLE V-1 FOREST TYPES BY REGIONAL DISTRIBUTION AND TYPICAL DOMINANTS	118
TABLE V-2 CURRENT FEDERALLY LISTED PLANTS.....	119
TABLE V-3 SOIL TYPES IN BONNEVILLE'S SERVICE TERRITORY	120
TABLE V-4 THREATENED AND ENDANGERED FISH SPECIES	125
TABLE V-5 THREATENED AND ENDANGERED SNAIL SPECIES	126
TABLE V-6 THREATENED AND ENDANGERED MAMMALS.....	129
TABLE V-7 THREATENED AND ENDANGERED BIRD AND INSECT SPECIES	129
TABLE V-8 USFS NATIONAL FORESTS WITH BONNEVILLE TRANSMISSION FACILITIES.....	136
TABLE V-9 BLM DISTRICTS WITH BONNEVILLE TRANSMISSION FACILITIES.....	137
TABLE VI-1 RUNOFF AND LEACH POTENTIAL	157
TABLE VI-2 RIPARIAN BUFFER ZONES	161
TABLE VI-3 HERBICIDE-FREE ZONES	161
TABLE VI-4 HERBICIDE TOXIC RATINGS FOR AQUATIC SPECIES	168
TABLE VI-5 HERBICIDE TOXIC RATINGS FOR MAMMALS AND BIRDS.....	173
TABLE VI-6 HERBICIDE ECOLOGICAL TOXICITIES AND CHARACTERISTICS.....	175
TABLE VI-7 HUMAN HEALTH TOXICOLOGY ASSESSMENT	197
	- 199

APPENDICES (SEE COMPANION VOLUME)

- A PUBLIC INVOLVEMENT
- B BIOLOGICAL WEED CONTROL AGENTS
- C BPA HERBICIDE LICENSING PLAN
- D SAMPLE EDUCATIONAL INFORMATION
- E CLEARANCE CRITERIA
- F USFS MITIGATION MEASURES AND BACKGROUND
- G BLM MITIGATION MEASURES AND BACKGROUND
- H PESTICIDE FACT SHEETS